



Gypsum Hollow-Block Production Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real gypsum hollow-block production line equipment.

12-16 starter mould cavities	1 size launch block format	7-10 days natural drying allowance	10-18 entry workforce
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

A small/medium line converting released calcined gypsum plaster into dimensionally controlled hollow or solid partition blocks through plaster storage and dosing, measured water and additive preparation, high-shear mixing, mould filling, vibration and air release, controlled initial setting, hydraulic core withdrawal and demoulding, natural or assisted drying, edge finishing, dimensional and strength testing, palletizing and dry storage.

Why this project fits Afghanistan

- Light gypsum partitions can reduce dead load and speed interior fit-out where building codes permit.
- One thickness concentrates mould investment, drying space and contractor training.
- Buying released plaster avoids coupling the launch to a separate calcination plant.
- Drying capacity and dimensional control-not moulding speed alone-govern saleable output.

Sanaatchi delivery scope

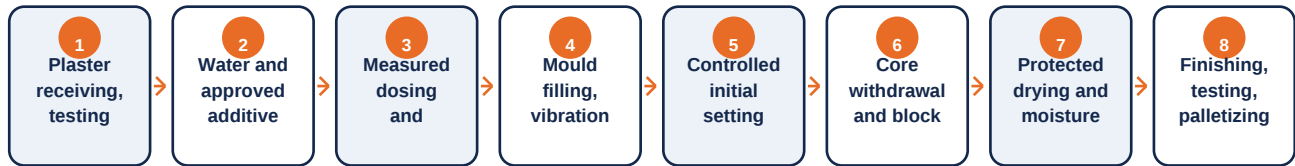
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Launch one partition thickness and one block size using purchased specification plaster. Screen a semi-automatic 12-16 cavity moulding unit with plaster silo, screw feeder, water/additive dosing, mixer, mould/core system, demoulding cart, level drying racks, trimming tools and laboratory. Provide 7-10 days protected natural drying capacity before considering an energy-consuming dryer.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Hollow gypsum partition block	One buyer-approved size, thickness, density, moisture, dimensional tolerance and compressive strength	Interior partition contractors and building-material distributors
Solid gypsum block	Separate density and handling specification after structural review	Selected internal non-load-bearing applications

Gypsum blocks are non-load-bearing partition products unless a licensed designer specifies otherwise. Plaster setting time must match filling and demoulding. Acceptance measures mix water, mould cycle, dimensions, squareness, density, moisture, compressive strength, surface defects, broken corners, drying time and installed wall trial. Fire and acoustic claims require named laboratory tests.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Plaster silo and screw dosing	Stores dry plaster and meters repeat batches	Sealed moisture protection
2	Water/additive dosing skid	Controls water-plaster ratio and approved additives	Calibrated load cells/meters
3	High-shear gypsum mixer	Produces uniform lump-free slurry	Matched to mould cycle
4	Hollow-block mould and core system	Forms one accurate block geometry	12-16 cavity entry basis
5	Hydraulic demoulding and transfer carts	Withdraws cores and protects green blocks	Low-damage handling
6	Level drying racks	Supports blocks through protected natural drying	7-10 days buffer
7	Trimming and pallet tools	Finishes edges and forms stable loads	Reusable corner protection
8	Block laboratory	Tests dimensions, moisture, density and strength	Buyer standard methods

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Made-in-China supplier reference: real gypsum hollow-block production line equipment.



Made-in-China supplier reference: second real machine configuration for gypsum hollow-block production line.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Released calcined gypsum plaster with controlled setting and strength
- Clean process water and only validated setting/foaming additives
- Optional approved fibres or lightweight filler after product trials
- Pallets, separators, wrap, labels, mould release and critical seals/spares

Utilities & infrastructure

- Three-phase power for mixer, hydraulics and conveying
- Dry plaster store protected from humidity and rain
- Level casting floor and large covered ventilated drying area
- Dust extraction at silo and dosing points
- Reliable clean water, drainage and wash-water settling

Quality, safety and environmental controls

- Release every plaster lot for setting time and moisture
- Calibrate plaster, water and additive dosing
- Control mixing time, slurry temperature and mould filling
- Inspect cores, mould faces and release before each cycle
- Measure block dimensions, moisture, density and strength
- Conduct pallet transport and trial-wall installation before sale

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

The lowest credible line buys specification plaster, makes one partition block and relies on protected natural drying. A gypsum-powder plant, heated dryer, building and product inventory are excluded.

Component	Indicative range	Notes
Silo, dosing, mixer and 12-16 cavity mould	US\$55k-145k	One block size
Demoulding, carts, racks and finishing	US\$28k-80k	Natural drying route
Dust control, laboratory and packing	US\$18k-48k	Quality-release scope
Freight, civil works, installation and spares	US\$30k-90k	Covered drying area dependent
Indicative installed low-entry total	US\$131k-363k	Plaster plant, building and working capital excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

- <https://xiangyi.en.made-in-china.com/product/wQYpLgCDZZrK/China-Hollow-and-Solid-Gypsum-Block-Machine-Production-Line.html>
- <https://yurui2018.en.made-in-china.com/product/pmcYThguUWq/China-Gypsum-Block-Production-Machine-Gypsum-Brick-Forming-Machine-Line.html>